# NS NickelSearch

### 30 March 2023 Cross Release:MM8

# SIGNIFICANT UPGRADE OF CARLINGUP NICKEL SULPHIDE INDICATED RESOURCES

# **KEY HIGHLIGHTS:**

- NickelSearch is pleased to report a significant upgrade of Carlingup nickel sulphide Indicated Resources to 8.3Mt @ 0.52% Ni, 0.06% Cu and 0.01% Co.
- Updated sulphide JORC 2012 Mineral Resource estimates (MRE) of 11.6Mt @ 0.56% Ni, 0.05% Cu and 0.01% Co.
- Significant Global JORC 2012 Resource of 155kt contained nickel.
- Work done since listing (including drilling, validation of historic data, and metallurgical test work) has significantly enhanced the confidence of the sulphide MRE.
- MREs for RAV1, RAV4 and RAV4 West demonstrate the potential for NickelSearch to continue to add resources through expansion of those shallow open pit resources and discovery of new deposits across the Carlingup Nickel Project -
  - Over 30 nickel sulphide targets with limited or no previous drilling identified across the Carlingup Nickel Project.
- Industry-leading approach adopted for geological modelling and resource reporting has impacted RAV8 MRE, but also highlights opportunities for more near-surface mineralisation at RAV8.
- Priority high-grade underground mineralisation zone at RAV8 to be tested in CY2023, with the aim to materially extend the zone that contained 8.4kt Ni @ 3.0% Ni.
- Immediate upside from the low-cost assessment of historic surface dump material, which is from the RAV8 mine, where only material above 1.0%-1.5% Ni was processed.
- Focus in CY2023 to deliver high-grade nickel discoveries to complement the existing shallow resource base through testing of high-priority regional targets:
  - Maiden RC programs at Serendipity and B1 scheduled for April 2023
  - $\circ$   $\;$  Follow-up drilling at recent nickel sulphide intersections at Sexton  $\;$
  - Extensional drilling at RAV8 high-grade underground mineralized zone and testing newly identified potential near-surface mineralisation.

**NickelSearch Limited (ASX: NIS) (NiS** or **Company)** is pleased to announce a huge step forward in confidence in the Mineral Resources for its flagship 100%-owned Carlingup Nickel Sulphide Project (**Carlingup** or the **Project**) near Ravensthorpe, Western Australia.

The updated **JORC 2012 Mineral Resource Estimate** (MRE), comprising **154.9kt** of contained nickel (see Table 1), of which **64.9kt** is from nickel sulphides. NickelSearch is extremely pleased to report an increase of Indicated Resources within the nickel sulphides to **42.3kt**, which represent 65% of the total resource. This increase in confidence is a result of the success of the in-fill drill programs completed during CY2022. The Company plans to support its existing shallow resource base through the discovery of high-grade nickel sulphides at depth.

#### NickelSearch's Managing Director, Nicole Duncan, commented:

"NickelSearch is focused on exploration for high-grade nickel sulphides at our Carlingup Project, which is underexplored at depth. We are confident that our systematic approach to exploration will deliver a nickel sulphide discovery, as we prioritise and test our prospective greenfield targets. We are off to a great start to our greenfields exploration program following the successful nickel sulphide intersections at Sexton. We are extremely excited to test our high-priority targets at Serendipity, B1 and the high-grade underground extensions at RAV8. Today's significant upgrade to Carlingup's nickel sulphide Indicated Resources is an important milestone, providing a base from which we can

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confidently grow, including at RAV8. NickelSearch is committed to delivering value through increasing the confidence of our existing shallow resource base and progressing our heap leach processing solution, which we believe will be the most economic pathway forward."

# CARLINGUP MINERAL RESOURCE ESTIMATE

Deposit Type	Deposit	Ore Type	Class*	Cut-off (% Ni)	Tonnes (Mt)	Grade (% Ni)	Grade (% Cu)	Grade (% Co)	Metal (Kt Ni)
fe	John Ellis	Goethite	Inf	0.3	10	0.60		0.029	59
Laterite	John Eilis	Saprolite	Inf	0.3	6	0.51		0.020	31
Ľ	Total Laterit	e		0.3	16	0.56		0.026	90
		Onen Die	Ind	0.3	3.3	0.56	0.12	0.01	18.1
	DAVO	Open Pit	Inf	0.3	0.6	0.61	0.02	0.01	3.8
	RAV8	Underground	Inf	0.6	0.3	2.99	0.09	0.01	8.4
		Subtotal	All	0.3/0.6	4.2	0.73	0.10	0.01	30.3
		Open Pit	Ind	0.3	1.2	0.58	0.00	0.01	6.9
	RAV1		Inf	0.3	0.1	0.45	0.00	0.01	0.3
nide		Subtotal	All	0.3	1.3	0.57	0.00	0.01	7.2
Nickel Sulphide		Oraca Dia	Ind	0.3	2.4	0.40	0.01	0.01	9.5
(el S	RAV4	Open Pit	Inf	0.3	2.1	0.42	0.02	0.01	8.8
Nick		Subtotal	All	0.3	4.4	0.41	0.02	0.01	18.2
		0	Ind	0.3	1.4	0.56	0.03	0.02	7.8
	RAV4-West	Open Pit	Inf	0.3	0.3	0.44	0.02	0.02	1.3
	Subtotal		All	0.3	1.7	0.53	0.03	0.02	9.1
			Ind	0.3	8.2	0.51	0.06	0.01	42.3
	Total S	Sulphide	Inf	0.3/0.6	3.4	0.67	0.02	0.01	22.6
	All		0.3/0.6	11.6	0.56	0.05	0.01	64.9	
Total					27.6	0.56			154.9

(\*Inf = Inferred Resources, Ind = Indicated Resources)

 Table 1: Carlingup Project Mineral Resources as at 1 March 2023 (and see NIS Prospectus lodged October 2021 for Resources as at 1

 August 2021)

The in-fill resource development drilling program focused on:

- shallow nickel deposits that are mineable through an open pit,
- upgrading RAV1, RAV4 and RAV4-West Exploration Targets to JORC 2012,
- testing the possibility of converting RAV5 to a resource, and
- upgrading the disseminated halo at RAV8.

# RAV1, RAV4, RAV4-WEST

Drilling within the Exploration Target areas at RAV1, RAV4, and RAV4W has confirmed the extent, width, and grade of mineralisation in each deposit. Replacement of historic drilling in these areas with high quality data has mostly converted at the higher end of the Exploration Targets, to Inferred or Indicated Mineral Resources (see figure 1, 2, 3).

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The RAV11 prospect seen in the middle of the RAV4 and RAV4 West area (Figure 3) is another mineralised area that may add further resources.



Figure 1: Impact of NiS drilling on RAV1, RAV4, and RAV4W mineral inventory (JORC Resources + Exploration Targets)





Figure 2: RAV1 resource model and Whittle Shell, which captures most of northern lode in 2 pits to a depth of 76m



*Figure 3:* RAV4 and RAV4-West resource model and Whittle Shell, which captures most of both deposits to a maximum pit depth of ~122m at RAV4; mineralisation in the middle ground is the RAV11 prospect



# RAV8

NickelSearch intends to move into production as soon as is practicable, aiming for a low-cost, modest-scale, open pit mining operation and heap leaching processing. The Company and Competent Person have newly implemented industry-leading and enhanced governance processes for defining Mineral Resources amenable to open pit mining which will, as best as can be determined, future-proof the Company's resource base against updated rules for the new JORC and ASX requirements. The Company and the Competent Person applied a robust assessment of "reasonable prospects for eventual economic extraction" (RPEEE) including use of a Whittle pit shell, optimised using the trailing 3-year average Ni price as published by the World Bank. This update to the MRE uses a metal price of US\$22,747/t Ni. The Company will develop a similar process for deposits more amenable to underground mining when applicable.

Application of RPEEE criteria has limited the open pit component of RAV8 resource to about 50m deeper than the current historic pit, which has the impact of reducing the RAV8 Mineral Resources by over 50%. Further test work and collection of density data by NiS has caused a net 10% reduction of tonnes for the entire deposit but the validation of Tectonic drilling results, reconciliation with past production, and confirmation of high proportions of soluble nickel has provided confidence to upgrade a significant portion of the open pit resources from Inferred to Indicated Resource classification.

There is good potential to increase the size of RAV8 resource. The area south of the historic pit has limited drilling in the ultramafic units near surface (see Figures 4 and 5). A programme is currently being designed to in-fill drill this area, and unsampled intervals in holes drilled by Tectonic are being examined to determine their suitability for sampling.

There is further potential to capture grade continuity of high-grade disseminated/massive mineralisation for potential underground mining at RAV8. The current resource indicates high continuity (at Inferred Classification) and NiS is working to test this assumption.



*Figure 4*: RAV8 resource model and Whittle Shells, which extends the depth of the historic pit to approximately 116m, and where the eastern wall, the southern cutback and the base of the pit interact with historic underground workings

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Figure 5: RAV8 cross-section showing growth potential

NickelSearch will also assess the material sitting at surface at RAV8, which was mined but below the cut-off grade for processing by Tectonic. Suitable material for heap leaching has an inherent value because it is already out of the ground and ready for processing. The material sitting at surface will form part of the drilling campaign to be carried out at RAV8 during Ravensthorpe wet winter months.

# RAV5

Drilling activity at RAV5 deposit defined a thin, low-grade channel from surface to approximately 150m in depth. Grade and tonnages are too low and the RPEEE process for open pit resources did not define a pit shell unless a very high nickel price could be realised. The Company will test potential depth extensions to the deposit for higher grade material when budgets permit.

# LOOKING AHEAD – MINERAL RESOURCE ESTIMATION

The total MRE at Carlingup has remained broadly stable since listing on the ASX in October 2021, benefitting from an increased level of confidence as NickelSearch looks to move forward to production. NickelSearch is also focused on advancing its metallurgical studies, where recent successes include:

- excellent preliminary ore sorting testwork, indicating nickel sulphides at Carlingup can be sorted based on magnetic induction and density,
- Nickel recoveries from seven-day nitric acid digests on RAV8 ore have resulted in impressive nickel recoveries of ~79% and ~86% at crush sizes of 100% passing 12.5mm and 8.0mm respectively, and
- an active bacterial culture has been isolated from site and tested on historical whole ore, giving outstanding final nickel recoveries of 83% and 82% on milled ore (100% passing 90μm) at 35°C and 40°C respectively.

See the Company's announcement of 9 November 2022 for more detailed information.

# LOOKING AHEAD – ONGOING EXPLORATION

Assays from the Company's recent drilling at its Sexton target, coupled with the success of the DHEM surveys there, give NiS confidence in continuing with its systematic testing of the 30+ greenfields targets defined across Carlingup (see NIS Announcement 14 March 2023).

NickelSearch continues to be very encouraged that Sexton has the potential to progress into a significant nickel discovery. The assay results alongside the modelled DHEM plates suggest mineralisation extends at depth and down-plunge. The very high conductivity of the DHEM plates also highlights the potential to intersect a high-grade channel, which will be a key focus for follow-up diamond drilling.

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In addition to the recent success at its Sexton target, NickelSearch is excited to commence its maiden drill programs at both the Serendipity and B1 greenfields targets. The Company is particularly eager to test Serendipity, which has had very little historical drilling and has an impressive Nickel/Chrome anomaly extending over a +1km strike length (see NIS Announcement 20 March 2023).

NickelSearch is proud to have a Project of the calibre of Carlingup, which allows an exploration strategy focused on testing high priority regional targets to identify sources of high-grade nickel sulphides, to compliment an existing resource base which is on the pathway to nickel production.

This announcement has been approved for release by the Board of NickelSearch Limited. Enquiries: Nicole Duncan Managing Director NickelSearch Limited information@nickelsearch.com



# About NickelSearch

NickelSearch Limited (ASX code: NIS) is a dedicated WA nickel sulphide explorer focused on advancing its flagship Carlingup Nickel Project. The asset has an existing resource base of 155kt contained nickel.

# Directors & Management

Nicole Duncan Managing Director

David Royle Non-Executive Chairman

Norman Taylor Non-Executive Director

Paul Bennett Non-Executive Director

Donald James Non-Executive Director NickelSearch ACN 110 599 650

**Projects** Carlingup Nickel Project (100%)

Shares on Issue

**Options** 13,250,817

ASX Code

Highly prospective tenure covering +10km strike
 Multiple high priority, drill-ready resource extension targets
 Proven high grade nickel production of 16.1kt Ni at 3.45%
 Significant, shallow resource base open in most directions
 Strategically positioned next to major nickel mining & processing hubs

2020 Resources Pty Ltd

ABN 49 643 392 349 Registered Office: 50 Angelo St, South Perth, WA 6151

#### 28 March 2023

Ms Nicole Duncan Managing Director NickelSearch Ltd Suite 14, Level 4, 92 Walters Drive OSBORNE PARK WA 6017

#### Re: Update to the Mineral Resources of the Carlingup Project

Dear Nicole,

Thank you for asking 2020 Resources Pty Ltd (the **Consultant**) to update the Mineral Resources of the Carlingup Project (**Project**), Western Australia.

#### **Overview**

It has been a pleasure to re-engage with NickelSearch (**NiS** or the **Company**) and work with you and the Board and Management team to implement the recommendations from the Independent Geologists Report (**IGR**) and begin mapping out a path to production. As I noted in the IGR, the Project has strong indicators for economic scale nickel sulphide mineralisation and since listing the Company has identified over 30 targets to explore in the coming years.

The path to production begins with this update to the Mineral Resource base. The processes we have jointly developed:

- Places the Company at the leading edge of industry standards for mineral resource estimation and reporting for open pit resources and the Consultant encourages the Company to develop similar standards for deposits that are more suited for underground mining.
- Should future-proof the Company against possible changes to rules and regulations in Mineral Resource reporting currently under review by the governing bodies (JORC and ASX) with respect to deposits amenable to open pit mining.

Since listing in October 2021, the Company has undertaken drilling activities at 5 known nickel sulphide deposits – RAV1, RAV4, RAV4W, RAV5, and RAV8. The data collected during those activities has been added to the ~50 years of knowledge and geological data collected and acquired by the Founders of the Company, its subsidiaries, and Joint Venture partners.

This wealth of geological knowledge underpins the value of the Project and is now stored in a secure, scalable, and readily accessible data management system from which the Company can continue to enhance value through further exploration and resource development activities.

We have also standardised the resource estimation process for all sulphide nickel deposits that incorporates latest developments in geostatistics and geological modelling, including implicit modelling techniques for geology and mineralisation modelling. The geostatistical approach of Ordinary Kriging (**OK**) has been adopted for all grade estimations.

In addition, we have improved governance controls and implemented an independent technical review process to provide the Board with assurance that this and all further resource updates are following the approved process and that no material errors have occurred during the geological modelling and grade estimation.

As defined by the 2012 Edition of the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves (**JORC 2012**), a Mineral Resource is that part of a deposit that has Reasonable Prospects for Eventual Economic Extraction (**RPEEE**). At present, JORC 2012 is not prescriptive about determining RPEEE and we expect future

changes to the Code to follow the lead of other international reporting codes and be more prescriptive about how RPEEE is defined.

To try and future-proof the Company against potential changes to JORC 2012, we have implemented a robust, transparent, and comprehensive RPEEE process to align Mineral Resource reporting with the Company's vision for a low-cost, modest scale mining operation with a heap leach process route. Mineral Resources considered suitable for open pit mining are now constrained within a Whittle pit shell optimised using the trailing 3-year average Ni price as published by the World Bank. This update to the Mineral Resource statement uses a metal price of US\$22,747/t Ni.

The initial RPEEE process and inputs may be considered conservative:

- Whittle input parameters are based on industry-standard costs for mining and heap leach processing. These can be refined as the Company moves into techno-economic studies including scoping studies and feasibility studies. The marginal cut-off grade calculated on these inputs is ~0.11% of soluble (recoverable) nickel which is approximately 0.2-0.25% Ni head grade. The Mineral Resource number presented in this letter and attached statements are reported at 0.3% Ni head grade to counter the current uncertainty with economic recovery at very low grades.
  - Note: further metallurgical test work may provide evidence and justification for reporting Mineral Resources at lower cut-off grades. The Consultant notes that contained metal in the deposits increases between 50% to 100% with each drop in 0.1% head grade nickel cut-off.
- The selection of the Whittle Shell for constraining the open pit Mineral Resource report is determined by the following factors:
  - Positive cashflow based on the input parameters used.
  - Ratio of waste to Mineral Resources (at 0.3% Ni cut-off grade) of no more than 10:1.

As discussed below, this approach has had a significant impact on all existing mineral resources but also provides the Company with information to refine its exploration target ranking and prioritisation system and helps provide greater focus for future resource development programmes. For example, despite a reduction in RAV8 Mineral Resources for this update, there is a clear opportunity to potentially increase this again through targeted drilling and sampling of shallow mineralisation which may reduce the waste to Resource tonnes ratio of a larger Whittle shell.

Mineral Resources are declared for all deposits except RAV5 which did not meet the initial criteria adopted for defining Mineral Resources in accordance with JORC 2012.

No further work has been undertaken on the nickel laterite resources for the John Ellis deposit however these figures are included for completion and the change of status for the Competent Person is noted.

#### Disclosure

During preparation of the Independent Geologists Report, which is attached to the Company's Prospectus, Andrew Weeks, Principal of 2020 Resources Pty Ltd, developed a keen interest in the Project and respect for the Founders Values and Vision.

Post-listing, Mr Weeks has acquired securities in the Company and can no longer be considered Independent of the Company.

#### Mineral Resources at 1 March 2023

**Table 1** shows the Mineral Resources for the Carlingup Project as at 1 March 2023.

Deposit Type	Deposit	Ore Type	Class*	Cut-off (% Ni)	Tonnes (Mt)	Grade (% Ni)	Grade (% Cu)	Grade (% Co)	Metal (Kt Ni)
te t	John Ellin	Goethite	Inf	0.3	10	0.60		0.029	59
Laterite	John Ellis	Saprolite	Inf	0.3	6	0.51		0.020	31
La	Total Laterite	2		0.3	16	0.56		0.026	90
		Open Pit	Ind	0.3	3.3	0.56	0.12	0.01	18.1
	RAV8	Open Pit	Inf	0.3	0.6	0.61	0.02	0.01	3.8
	KAVO	Underground	Inf	0.6	0.3	2.99	0.09	0.01	8.4
		Subtotal	All	0.3/0.6	4.2	0.73	0.10	0.01	30.3
		Open Pit	Ind	0.3	1.2	0.58	0.00	0.01	6.9
	RAV1		Inf	0.3	0.1	0.45	0.00	0.01	0.3
nide		Subtotal	All	0.3	1.3	0.57	0.00	0.01	7.2
Nickel Sulphide		Open Pit	Ind	0.3	2.4	0.40	0.01	0.01	9.5
cel S	RAV4		Inf	0.3	2.1	0.42	0.02	0.01	8.8
Nick		Subtotal	All	0.3	4.4	0.41	0.02	0.01	18.2
		Onon Dit	Ind	0.3	1.4	0.56	0.03	0.02	7.8
	RAV4-West	Open Pit	Inf	0.3	0.3	0.44	0.02	0.02	1.3
		Subtotal	All	0.3	1.7	0.53	0.03	0.02	9.1
			Ind	0.3	8.2	0.51	0.06	0.01	42.3
	Total S	Sulphide	Inf	0.3/0.6	3.4	0.67	0.02	0.01	22.6
	All			0.3/0.6	11.6	0.56	0.05	0.01	64.9
Total					27.6	0.56			154.9

#### Table 1: Carlingup Project Mineral Resources as at 1 March 2023

(\*Inf = Inferred Resources, Ind = Indicated Resources)

**Attachment A** contains a Statement of Mineral Resources for the sulphide nickel deposits prepared in accordance with JORC 2012.

The Mineral Resource statement for the John Ellis Laterite deposit, attached to the Company's Prospectus, remains unchanged although the status of the Competent Person is noted.

#### **Explanation of Results**

The resource development activities undertaken by the Company since listing has enhanced knowledge of the sulphide nickel deposits which are the subject of this update.

Drilling within the Exploration Target areas at RAV1, RAV4, and RAV4W has generally confirmed the extent, width, and grade of mineralisation in each deposit. Replacement of historic drilling in these areas with high quality data has mostly converted the Exploration Targets to Inferred or Indicated Mineral Resources (Figure 1). In all cases, the application of the RPEEE Whittle pit shell has excluded some mineralisation in the former Exploration Target areas which is the cause for not achieving the upper end of the range.

#### Update to the Mineral Resources of the Carlingup Project



# Figure 1: Impact of NiS drilling on RAV1, RAV4, and RAV4W mineral inventory (JORC Resources + Exploration Targets)

- Drilling at the historic RAV8 mine site has confirmed mineralisation grades and widths intersected by holes drilled by Tectonic Resources, the previous operator of the mine. In the eastern parts of the deposit, this includes defining the near surface extensions to massive and heavy sulphide lenses which were partially mined by Tectonic Resources via underground mining methods.
- At RAV8, RPEEE criteria used suggests a pit about 50m deeper than the historic mine is a reasonable constraint for the reporting of open pit resources. Application of the RPEEE criteria is the major cause of the 50% reduction in RAV8 Mineral Resources. Further test work and collection of density data has caused a net 10% reduction of tonnes for the entire deposit but the validation of Tectonic drilling results, reconciliation with past production, and confirmation of high proportions of soluble nickel has provided confidence to upgrade a significant portion of the open pit resources from Inferred to Indicated Resource classification.
  - Note: Parameters and nickel price applied to the Whittle optimisation do define a larger pit shell encompassing significantly more of the deposit than the selected shell. At a 0.3% Ni cut-off grade the

ratio of waste to Resource tonnes for the deepest pit shell is over 15:1. In the Consultants view, this ratio does not meet JORC requirements for "Reasonable prospects" and a pit shell with an approximately 9:1 ratio was chosen instead. This shell encompasses modelled mineralisation to a depth of about 150 to 160m metres compared to the 250m assumed in previous resource statements.

• The above approach may be considered conservative and there is potential to increase the size of RAV8 resource. The area south of the historic pit has limited sampling in the ultramafic units near surface. A programme is currently being designed to in-fill drill this area and unsampled intervals in holes drilled by Tectonic are being examined to determine their suitability for sampling.



Figure 2: RAV8 resource model and Whittle Shells.

- Further information pertaining to the RAV8 stockpiled tailings resource discovered during archive retrieval and site inspections raises uncertainty about the potential for this material to have RPEEE via a heap leach process. The stockpile resources have been removed from inventory until further survey and metallurgical test work to determine the viability of processing this material is completed.
- Drilling activity at RAV5 deposit defined a thin, low-grade channel from surface to approximately 150m in depth. Grade and tonnages are too low and the RPEEE process for open pit resources did not define a pit shell unless a very high nickel price could be realised. The Company will test potential depth extensions to the deposit for higher grade material when budgets permit.

 Overall, the JORC Mineral Resources for the Project reduced by 6% tonnes and 8% metal driven mainly by the RAV8 update, but confidence in the resources increased significantly with 8.2 Mt of the total JORC Mineral Resources having Indicated Classification (up from 0.4 Mt).

#### Conclusion

In the Consultants opinion, the adoption of the processes outlined above and a commitment to further refine RPEEE criteria for deposits amenable to underground mining places the Company at the leading edge of industry standards for mineral resource estimation and reporting. With a greater focus by investors and regulators on environmental, social, and governance (**ESG**) matters the Company is well positioned to comply with likely further amendments to JORC and ASX rules currently under consideration by those organisations.

Prepared on behalf of 2020 Resources Pty Ltd by:

Andrew Weeks (Director)

#### About 2020 Resources

2020 Resources was founded by experienced mining geologist, Andrew Weeks, to promote excellence in mineral resource development and ore control processes. Andrew Weeks is a geologist with 35 years of experience in the mining industry who has had a privileged career working on and visiting tens of mineral resource projects and mines on every continent (except Antarctica). He has worked on gold, nickel, silver, diamond, uranium, copper, tungsten, PGE, and iron ore projects. As a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM), he has sufficient experience to qualify as a Competent Person for gold, silver, sulphide nickel, laterite nickel and various types of iron ore.

Andrew credits his successes to the teams that have supported him in various roles and the many mentors and coaches across all mining disciplines who gave their time willingly and shared their knowledge openly. He feels a strong obligation to continue this legacy by openly sharing and passing along his experience and knowledge to the next generations of mining personnel.

This Mineral Resource Statement relates to the RAV1, RAV4, RAV4W and RAV8 sulphide nickel deposits of the Carlingup Project.

The Mineral Resource estimates presented in this Statement are classified and reported in accordance with the Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).

# 1.0 Project Location and Land Holding

The Carlingup Project is about 25 km east of Ravensthorpe in southern Western Australia (*Figure 3*) and contains known deposits of sulphide and laterite nickel. The deposits that are the subject of this Statement are readily accessible from the South Coast Highway via the unsealed secondary roads and farm tracks. NiS and its subsidiary company, holds Mining Leases M74/13, M74/082, and M74/106 (*Table 2*) which cover the deposits.

RAV1, RAV4, and RAV4W deposits are situated on freehold farmland. RAV8 deposit is predominantly on vacant Crown Land, however, is bisected by the South Coast Highway. Land on the southern side of the highway is freehold farmland. WA has well-regulated processes and procedures for exploration and mine development on these land types.



Figure 3: Location of Carlingup Sulphide Nickel Deposits near Ravensthorpe.

Tenement No.	Registered Holder	Date Expiry	Application Date	Hectares	Annual Expenditure	Annual Rent	Estimated Annual Rates
M74/82-I	AML (Ravensthorpe) Pty Ltd	18/08/2034	11/03/1992	766.10	\$76,700.00	\$16,874.00	\$6,432.00
M74/106-I	AML (Ravensthorpe) Pty Ltd	01/07/2029	25/09/1996	511.50	\$51,200.00	\$11,264.00	\$4,321.52
M74/13	Medallion Metals Limited	05/03/2027	06/12/1983	427.60	\$42,800.00	\$9,416.00	\$3,626.30

#### **Table 2: Tenement Details**

# 2.0 Geology

The Carlingup Project covers the Ravensthorpe Greenstone Belt (the Belt), which sits in the Youanmi Terrane, the central and oldest part of the Yilgarn Craton. The Belt is bound to the west and south by deep crustal structures that mark the edge of the Terrane in the west and the edge of the craton in the south. The two important features of the Belt relevant to the Carlingup Project, are the presence of a metamorphosed sedimentary basin called the Chester Formation (as a source of sulphur) on which the metamorphosed komatiite flows of the Bandalup Ultramafics intruded and deposited.

It is evident that the Carlingup Project, specifically the Bandalup Ultramafic contains nickel sulphide and nickel laterite mineralisation. In some places, concentrations of nickel sulphides have reached economic quantities with Tectonic Resources mining 468,131 tonnes of ore at a grade of 3.45% nickel for 16,129 tonnes of contained nickel from the RAV8 deposit between 2000 and 2007. FQM mines and processes laterite nickel and cobalt over Bandalup Ultramafics at RNO and report that recent mine development at the Shoemaker-Levy deposit provides about 20 years of mining life.



Figure 4: Geological and structural map of the Bandalup Ultramafics showing location of the RAV deposits.

### 3.0 Mineral Resource Assumptions and Method

The Mineral Resource estimates for the RAV1, RAV4, RAV4W, and RAV8 deposits are based on factors and assumptions as set out below.

#### 3.1 Geology

- Modelling of the mineralisation was conducted using the sign-distance implicit modelling technique at a range of nickel grade thresholds. Incomplete sampling of the drill holes had resulted in some drill holes having grades above the threshold values in the first or last sample. In these instances, the mineralised zone was modelled to the start or end of sampling and may be considered conservative.
- The mineralisation envelopes generally match the geological boundaries between the ultramafic host-rocks and surrounding (non-mineralised) meta-sediments and mafic rock types.
- At RAV8, a detailed geological model created in LeapFrog modelling software provides further constraint to the mineralisation envelopes.
- Detailed geological models for RAV1, RAV4, and RAV4W are still being developed. Multiple generations of logging and logging codes by previous explorers including NiS, its predecessor AML and its subsidiary Phanerozoic Energy Pty Ltd (PEPL) creates too much confusion for the modelling software and the Consultant is assisting NiS rationalise and standardise the logging codes to facilitate this detailed modelling at Project and deposit scale.
  - Mineralisation envelopes are visually checked against the drillhole logging codes to ensure they are confined to ultramafic lithologies.
  - Completion of the detailed geological models for these 3 deposits will be required before increasing resource confidence above Indicated Resources.

#### **3.2** Data

- Drilling data collected by NiS, its predecessor AML, its subsidiaries, and Joint Venture partners or acquired through acquisition of M13/72 (RAV8) and other tenements associated with the Project has been imported to a secure and scalable MX Deposit data management system licenced from Seequent.
- Data for the RAV1-4-4W sulphide nickel deposits (Figure 5) has been collected by multiple exploration companies including NiS, its predecessor AML and its subsidiary PEPL, previous joint venture partners, and other explorers. The long association of the NiS Founders with the Project has provided a direct (albeit convoluted) chain of custody for the drilling data associated with the Mineral Resources.
- Drilling data for RAV8 (Figure 6) is by Tectonic Resources.
- Digitisation of the older drilling data into relational databases by previous explorers such as Traka Resources and IGO did not include all meta-data and NiS is currently updating its MX Deposit database with missing meta-data from the public-access WAMEX database provided by the Geological Survey of Western Australia.
- Drilling activities since listing have generally confirmed the older drilling information, much of which was collected using methods and standards of collection that have since become industry-standard.
- Only DD, RC, and modern air core drilling (by NiS) data is used in the Mineral Resource estimates.
- Drill hole spacing varies across and within the deposits from 20 m by 20 m to 80 m by 80 m. Areas of the deposits with data spacing greater than 80 m by 80 m are excluded from the Mineral Resource figures.
- Nickel assays are available for most intervals although some older drilling did not assay meta-sediments, volcanics, and assumed barren ultramafic intervals. Recent drilling by NiS has assayed all intervals where ultramafic rock types are encountered plus a buffer of waste material above and below the ultramafic contacts. In older drilling data there are significantly fewer Cu and Co assays and estimates of these grades do not contain the same confidence as the nickel grade estimates.

- All assay data is composited to 1m downhole increments for resource estimation.
- Bulk density data includes measurements by Tectonic Resources at RAV8 found in archives by NiS post-listing with further support of an additional 500 measurements by NiS across the deposits. A dry bulk density of 2.5 t/m3 and 2.7 t/m3 are applied to the oxide-transition and fresh rock respectively at all deposits.
- In the Consultant's opinion, the data is of sufficient quality and quantity to support Indicated and Inferred Mineral Resources.



Figure 5: RAV1, RAV4 & RAV4W - Collar Locations



Figure 6: RAV8 drill hole locations over a 2018 aerial survey. (Note: Collar positions lie beneath the waste dumps to the east and west of the pit).

#### **3.3 Estimation Approach**

- Ordinary Kriging (OK) grade estimation is used to estimate the nickel, copper, and cobalt grades into 10 m by 10 m by 3 m blocks.
- The kriging plan involved several passes to estimate grade to all mineralised lodes:
  - High Grade Pass Blocks within a 20 m by 20 m by 6 m radius of samples above a defined threshold grade are estimated first using all available data. Threshold grade varied by mineralisation domain.
  - Pass 1 Excluded High Grade samples. Blocks are estimated with a minimum of 6 samples from at least 2 drillholes. Samples are selected using a 100 m by 100 m by 8 m search radius along the plane of the mineralised lode.

- Pass 2 Excluded High Grade samples. Blocks are estimated with a minimum of 4 samples from at least 2 drillholes. Samples are selected using a 150 m by 150 m by 8 m search radius along the plane of the mineralised lode.
- Pass 3 Excluded High Grade samples. Blocks are estimated with a minimum of 2 samples. Samples are selected using a 200 m by 200 m by 20 m search radius along the plane of the mineralised lode. The final pass aimed to estimate grades in all remaining blocks within the mineralisation domain.
- The mineralised domains constrained the nickel, copper, and cobalt grade estimates. The highest-grade domains are estimated first using all data. Mineralisation domains based on lower grade thresholds are estimated by excluding data within the higher-grade domains but incorporate lower grade material along the domain boundaries.
- No high-grade cuts have been applied but as described above the highest-grade samples are spatially restricted and only influence grade estimates in the blocks within a 20 m radius of the sample to prevent over-extrapolation of grade.
- Blocks where the average sample distance is greater than 50m are excluded from the Mineral Resource statement.
- Density is applied globally by weathering horizon.

#### **3.4 Mining and Geometallurgical Considerations**

- The geometry of the deposits is amenable to open pit mining and in the instance of RAV8 a broader, deeper zone may have potential for extraction via underground mining methods.
- The limits of the open pit resources are determined by a Whittle pit shell optimised with the following parameters:
  - Nickel price of US\$22,747/t
  - Slope angles of 40° in oxide and 45° in fresh and transitional rock, which is consistent with the wall angles of RAV8 pit.
  - Variable metal recovery of 75% of the estimated soluble sulphide material. This is derived from previous
    metallurgical test work by AML and recent nitric acid digest tests on samples from each deposit. Soluble
    nickel component is estimated as the nickel head grade less non-soluble nickel (NSNi) component which
    has been set as follows:
    - For RAV1, RAV4, and RAV4W 0.8% NSNi for oxide, 0.2% NSNi for partially oxidised, and 0.15% for Fresh rock.
    - For RAV8 0.1% NSNi for Talc-carbonate altered ultramafic, 0.15% NSNi in Serpentinite, and 0.2% NSNi for all other ultramafic rocks.
    - Further metallurgical test work and estimation of metallurgical parameters into the resource model is required to increase resource confidence to Measured classification. The Company is currently completing a range of assessments including column leach tests on drill core collected by NiS during 2022.
  - Industry standard mining, processing, transport, and sale costs for small- to medium-scale operations in Western Australia.
- Mineral Resources are reported at 0.3% Ni cut-off grade as a proxy for the economic and likely practical limits of recovering nickel from the deposits using open pit mining methods. At RAV8 a portion of the deposit may be extracted by underground mining methods and a 0.6% Ni cut-off grade is applied to material below the optimised pit shell.

- At 0.3% Ni cut-off, the Whittle Shells selected to constrain the Mineral Resources for RAV8 contain a waste to
  resource tonnage ratio of about 9:1. At RAV1 the ratio is about 7:1. The combined RAV4 and RAV4W pit shells
  have a ratio of about 4:1.
- RAV1, RAV4, and RAV4W deposits are located at a significant distance from tenement boundaries and have no further constraints applied. All are on cleared or semi-cleared freehold farmland and it is assumed that an agreement could be reached with the landholder to begin mining operations.
- RAV8 deposit is also not affected by tenement boundaries, but other infrastructure is present. Any extension to the historic open pit will likely interact with historic waste dumps and the South Coast Highway.

# 4.0 Mineral Resource Statement

The Mineral Resources in the RAV1, RAV4, and RAV4W deposits are classified as Indicated or Inferred Resources. The classification of Indicated and Inferred Resources is considered appropriate based on geological confidence criteria and the quantity and spacing of drilling and sampling information.

The Mineral Resources consist of weathered and fresh Bandalup Ultramafic rocks.

**Table 3** presents the Mineral Resource for the RAV1, RAV4, RAV4W, and RAV8 deposits as at 1 March 2023.

Deposit Type	Deposit	Ore Type	Class*	Cut-off (% Ni)	Tonnes (Mt)	Grade (% Ni)	Grade (% Cu)	Grade (% Co)	Metal (Kt Ni)
		Onon Dit	Ind	0.3	3.3	0.56	0.12	0.01	18.1
		Open Pit	Inf	0.3	0.6	0.61	0.02	0.01	3.8
	RAV8	Underground	Inf	0.6	0.3	2.99	0.09	0.01	8.4
		Subtotal	Inf	0.3/0.6	4.2	0.73	0.10	0.01	30.3
		Open Pit	Ind	0.3	1.2	0.58	0.00	0.01	6.9
nide	<u>₽</u> RAV1		Inf	0.3	0.1	0.45	0.00	0.01	0.3
Nickel Sulphide		Subtotal	All	0.3	1.3	0.57	0.00	0.01	7.2
(el S		On an Dit	Ind	0.3	2.4	0.40	0.01	0.01	9.5
Nick	RAV4	Open Pit	Inf	0.3	2.1	0.42	0.02	0.01	8.8
		Subtotal	All	0.3	4.4	0.41	0.02	0.01	18.2
	RAV4-West	Onon Dit	Ind	0.3	1.4	0.56	0.03	0.02	7.8
		Open Pit	Inf	0.3	0.3	0.44	0.02	0.02	1.3
		Subtotal	All	0.3	1.7	0.53	0.03	0.02	9.1
	Total Sulphide			0.3/0.6	11.6	0.56	0.05	0.01	64.9

 Table 3: Carlingup Sulphide Nickel Mineral Resources as at 1 March 2023

(\*Inf = Inferred Resources, Ind = Indicated Resources)

# 5.0 The JORC Code Assessment Criteria

JORC 2012 Table 1 is a checklist against the Principles of the Code. It must be provided for significant projects in a Public Report to ensure that it is clear to the investor whether items have been considered and deemed of low consequence or have yet to be addressed or resolved.

#### 5.1 Section 1 of JORC Table 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse Nickel that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Diamond drill core (DD), reverse circulation (RC), and air core (AC) drilling was used to obtain samples for the mineral resource estimation.</li> <li>Other older potentially poor-quality samples such as RAB drilling are excluded from the resource estimate.</li> <li>Diamond core obtained in mineralised zones has been split on geological contacts for sampling purposes.</li> <li>Samples from RC drilling are typically 1 m downhole intervals regardless of geology, with samples split by a riffle splitter. Some older holes contain 4m composite samples but these are typically in unmineralised intervals.</li> <li>Sampling targeted zones with indications of mineralisation. In earlier holes zones deemed un-mineralised are often unsampled, even in favourable geology.</li> <li>Sampling protocols for the earlier drilling are being retrieved from WAMEX database and tenement reports.</li> <li>Previously assaying was completed by Genalysis Laboratory Services Pty Ltd in Perth and Ultra Trace Pty Ltd using mixed acid total digestion with ICP-OES finish method and by mixed acid digest with AAS finish.</li> <li>Samples collected by NiS are assayed at Intertek Laboratory in Perth.</li> </ul>
Drilling techniques	• Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit, or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>The estimation used only those drill holes of sufficient confidence for the resource estimates.</li> <li>RAV1 – 97 DD holes, 45 RC, and 25 AC.</li> <li>RAV4 – 34 DD holes and 27 RC.</li> <li>RAV4W – 26 DD holes, 49 RC, and 21 AC.</li> <li>RAV8 - 150 DD holes including underground DD holes. 454 RC holes</li> </ul>

Criteria	JORC Code explanation	Commentary
		including RC drilled from the open pit.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Core and RC recovery has not been captured in digital records of older drill holes. NiS are currently checking WAMEX records and archives for this information.</li> <li>Core recovery for NiS DD drilling is &gt;95%.</li> <li>Sample recovery for NiS RC is not captured and NiS are implementing systems to capture this in future programmes. Visual inspection of RC and AC holes suggests &gt;80% recovery, other than collar samples which are typically lower.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All sample intervals have geological logging by an experienced geologist.</li> <li>Every sample interval is logged. Logging is qualitative and the various Companies used detailed lithological coding systems which NiS are still rationalising and validating in 3D.</li> <li>All data is stored in an MX Deposit database under licence from Seequent.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>RC and AC samples are split at the rig with a riffle splitter or rotary cone splitter depending on the drill programme.</li> <li>Duplicate samples were collected for most drill programmes. Duplicate sample results where available show good repeatability.</li> <li>Specific data for older holes is being extracted from WAMEX database for completion.</li> <li>For NiS samples, the entire sample is pulverised at Intertek laboratory in Perth prior to sample size reduction.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the</li> </ul>	<ul> <li>Details for all older holes are being retrieved from WAMEX database. Available records indicate that the entire sample was digested with a mixture of 4 acids and assayed for various metals including Ni, Cu, and Co (although this varies between</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.</li> </ul>	<ul> <li>Companies). Cu and Co assays are less frequent than Ni.</li> <li>All NiS samples are assayed at Intertek Laboratory using a 4-acid digest with ICP-OES or ICP-MS finish.</li> <li>All NiS samples are submitted with 2 standard reference samples per 100 samples. Standard reference samples are sourced from ORE.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>NiS has completed a thorough review and compilation of drilling data from the Project area.</li> <li>All older RC and DD drilling data used in the Mineral Resource estimate is considered good quality and generally confirmed by NiS drilling.</li> <li>Further verification via WAMEX database is in progress and the NiS will twin some older holes in future programmes before raising classification level above Indicated Resources.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drill hole collar locations were surveyed by GPS, DGPS, or using real time kinetic global positioning survey (RTKGPS) by a local surveyor with surveyed coordinates provided electronically.</li> <li>Older RAV8 drillholes were surveyed by the Mine Survey team in local mine grid coordinates and converted to GDA94 via transformation in standard industry software.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drill holes are variably spaced ranging from 20 m by 20 m up to 80 m by 80 m grid over the deposits which is considered suitable for Inferred Resources in this style of deposit.</li> <li>Samples are predominantly collected as regular 1 m down hole composites. Some 4m composites exist in older drillholes but these are generally below the reported cut-off grade.</li> <li>The estimation composited all data to 1 m</li> </ul>

Criteria	JORC Code explanation	Commentary
		sample length.
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Drillholes are generally perpendicular to the deposit mineralisation trends, although some deeper holes at RAV8 intersect mineralisation at a steeper angle due to logistics of drilling around voids.</li> <li>Underground DD drilling at RAV8 tended to drill perpendicular to mineralisation, however, in places is limited by access.</li> </ul>
Sample security	<ul> <li>The measures taken to ensure sample security.</li> </ul>	<ul> <li>Experienced NiS staff supervised the drilling and sample collection of all NiS drilling. Samples were prepared and assayed at Intertek in Perth.</li> <li>Older drilling results have been provided to NiS often directly from the Company that collected the information.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>No independent audits of the sampling have been conducted.</li> </ul>

### 5.2 Section 2 of JORC Table 1: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul> <li>RAV4 and RAV4W deposits are on M74/106.</li> <li>RAV1 deposit is on M74/082.</li> <li>RAV8 deposit is on M74/013.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Pickands Mathers International (PMI) discovered RAV1 in 1969 and completed detailed exploration including surface trenching, mapping, soil and gossan sampling, electrical and geophysical survey, and percussion and diamond drilling. In RAV1 this comprised 35 diamond drill holes and 37 percussion drill holes.</li> <li>WMC completed a transient</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>electromagnetic survey and some percussion drilling in 1981.</li> <li>Outokumpu Exploration Australia (OEA) re-logged PMI core and completed surface mapping in 1992/93. It also completed an appraisal of PMI data. Further infill drilling was completed in 1994.</li> <li>RAV4 and RAV4W were identified in 1971 from linear aeromagnetic anomalies that were followed up with drilling. 10 diamond drill holes and 49 percussion drill holes and 17 percussion drill holes at RAV4W.</li> </ul>
Geology	<ul> <li>Deposit type, geological setting, and style of mineralisation.</li> </ul>	<ul> <li>The deposits are within the Archaean Ravensthorpe Greenstone Belt, which consists of metabasalt, metasediments, and ultramafic rocks.</li> <li>Nickel and cobalt mineralisation are hosted in the Bandalup Ultramafics.</li> </ul>
Drill hole information	<ul> <li>A summary of all information material to the under-standing of the exploration results including a tabulation of the following information for all Material drill holes:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length</li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>All relevant and reliable drilling data is used in the estimate of Mineral Resources.</li> </ul>
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high-grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate</li> </ul>	<ul> <li>All relevant and reliable drilling data is used in the estimate of Mineral Resources.</li> <li>Data is composited to 1m downhole increments for resource estimation.</li> </ul>

#### Criteria JORC Code explanation Commentary short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. Relationship These • relationships are particularly Not applicable for Mineral Resources. hetween important in the reporting of Exploration mineralisation Results. widths and *If the geometry of the mineralisation with* • intercept respect to the drill hole angle is known, its lengths nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known'). Diagrams • Appropriate maps and sections (with scales) All maps and figures presented in this and tabulations of intercepts should be document have been created in industry included for any significant discovery being accepted GIS and CAD drafting packages reported. These should include, but not be and are produced to scale in their original limited to a plan view of drill hole collar format and dimensions. locations and appropriate sectional views. Balanced • Accuracy and quality of surveys used to Drill hole collar locations were surveyed Reporting locate drill holes (collar and down-hole using real time kinetic global positioning surveys), trenches, mine workings and other survey (RTKGPS), GPS, and DGPS by a local locations used in Mineral Resource or mine surveyors with surveyed estimation. coordinates provided electronically. Where comprehensive reporting of all Survey is accurate to ± 20 mm however Exploration Results is not practicable, some older data collected in GDA84 representative reporting of both low and datum may have larger errors, but these high-grades and/or widths should be are not considered material for the practiced to avoid misleading reporting of Mineral Resource. Exploration Results. Other Other exploration data, if meaningful and Nis Founders and other consultants have substantive material, should be reported including (but completed extensive surface geological exploration not limited to): geological observations; mapping over the Project area. data geophysical survey results; geochemical A combined lithological and structural survey results; bulk samples - size and map of the Carlingup area is provided in method of treatment; metallurgical test Figure 4 above. bulk density, groundwater, results; geotechnical and rock characteristics; potential deleterious or contaminating substances. Further work NiS plan to continue extensional and infill The nature and scale of planned further

Criteria	JORC Code explanation	Commentary
	<ul> <li>work (e.g., tests for lateral extensions or depth extensions or large- scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>drilling at all 4 deposits and undertake further metallurgical test work on each deposit.</li> <li>Planning of these programmes, especially at RAV8, is currently in progress.</li> </ul>

# 5.3 Section 3 of JORC Table 1: Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>All older drilling has been compiled and validated and loaded to a secure database, MX Deposit.</li> <li>All NiS drilling was captured on Excel worksheets and loaded directly to MX Deposit.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>The Competent Person (Section 6.0) has visited the Project area on multiple occasions since 2015 and again since NiS listed.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The drill spacing and geological logging is sufficient to confirm geological continuity of the mineralisation.</li> <li>There are possibly dolerite/mafic dykes cross cutting the deposits. Insufficient data exists to quantify and model these features.</li> </ul>
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>Deposit dimensions vary between 300 m and 500 m along strike.</li> <li>Deposits have generally been tested to approximately 150m down dip.</li> <li>All deposits remain "open" down dip, and strike length is generally limited to the extent of the resource models.</li> </ul>

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>The parent block size for all resource models is 10 m by 10 m by 3 m which is considered suitable for the data spacing. The model includes higher resolution cells of 2.5 m by 2.5 m by 1 m on the boundaries of mineralisation.</li> <li>Estimation of nickel, copper, and cobalt was by Ordinary Kriging interpolation method. Grade estimates were limited to Ni mineralisation boundaries.</li> <li>Search orientations aligned with the lithostratigraphic trends.</li> <li>Grade estimation was in 3 passes with samples selected using a 100 m by 100 m by 8 m search radius for the first pass along the plane of the mineralised zone. The range increases to 150m for the second pass and a third pass designed to fill all unestimated blocks uses 200m.</li> <li>A minimum of 6 samples and maximum of 40 samples is used for the first pass, with samples reducing to 4 and 2 in Pass 2 and 3 respectively.</li> <li>No top cutting was considered necessary however high-grade samples are constrained to blocks within a 20m radius of the sample.</li> <li>Model validation included visual examination of sample to block grade conformance and statistical analysis.</li> </ul>
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>Tonnages are estimated and reported on a dry basis.</li> </ul>
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul> <li>A cut-off grade of 0.3% was applied to the Mineral Resource estimates to represent potential future open pit mining.</li> <li>At RAV8, the mineralisation below the constraining open pit resource shell is reported at 0.6% Ni cut-off grade.</li> </ul>

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, however the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	<ul> <li>The RPEEE process implemented by the Consultant for NiS focusses on open pit mining.</li> <li>Mineral Resources are constrained to a moderate strip ratio (max. 10:1) optimised pit shell derived at a \$22,747/t nickel price.</li> </ul>
<i>Metallurgical factors or assumptions</i>	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, however the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>Metallurgical testing has been completed during previous evaluation works, which included head assaying, grinding requirements and batch floatation tests for three ore type composites.</li> <li>Nitric acid digests on selected RC samples from recent NiS drilling formed the basis for assigning NSNi.</li> </ul>
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfield project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	<ul> <li>There have been no Environmental Impact Assessments conducted on the project.</li> <li>RAV1, RAV4, and RAV4W deposits are generally on cleared or partially cleared farmland.</li> <li>The RAV1 resource occurs immediately adjacent to the ephemeral Boaiup Creek. Any mining proposal for RAV1 would need to consider re-alignment of this drainage in the RAV1 area.</li> <li>RAV8 deposit is on ground disturbed by historical mining activity, although any expansion of the historic pit may require clearing revegetated waste dumps. Future mining studies may need to consider options for mining below the South Coast Highway.</li> <li>WA has well-regulated processes and procedures for exploration and mine</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>development on these land types and NiS will need to complete detailed heritage and environment surveys as part of the project development.</li> <li>No allowance has been made for any potential exclusion zones.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size, and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vughs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>A dry bulk density of 2.5 t/m3 and 2.7 t/m3 are applied to the oxide and transition-fresh horizons respectively at all deposits.</li> <li>Density values are derived from over 500 tests across the 4 deposits.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity, and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Persons view of the deposit.</li> </ul>	<ul> <li>Indicated Resources are estimated in Pass 1 or 2 and have an average distance to samples &lt;40m.</li> <li>Inferred Resources are all remaining estimated blocks where the average distance is &lt;50m.</li> <li>All underground resources at RAV8 are classified as Inferred Resources.</li> <li>For RAV1, RAV4, and RAV4W all blocks below the RPEEE pit are unclassified.</li> <li>For RAV8 all blocks below the RPEEE pit and &lt;0.6% Ni are unclassified.</li> </ul>
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>An independent review of the Mineral Resource estimates has been completed by SRK mining consultants.</li> <li>No material items with respect to the estimation process were identified, however SRK expressed concern for the resource classification given the age of some drilling.</li> </ul>
Discussion of relative	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an	<ul> <li>The relative accuracy and confidence in estimated tonnages and grade is reflected in the Mineral Resource classification</li> </ul>

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	<ul> <li>approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate and the procedures used.</li> </ul>	discussed above.

# 6.0 Competent Person's Statement

The information in this statement which relates Mineral Resource estimation and classification of Mineral Resources is based on information prepared under the supervision of Mr Andrew Weeks, Director of 2020 Resources Pty Ltd, and a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Weeks has sufficient relevant experience to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition).

Mr Weeks is not Independent of NiS and has a minor holding of securities in the Company.